

Form PTO-1449 U.S. Department of Commerce (REV. 8-83) Patent and Trademark Office INFORMATION DISCLOSURE CITATION (use several sheets if necessary)	Atty. Docket No. ENZ-5(D8)(C2)	Serial No. 08/486,069
	Applicants: Dean L. Engelhardt et. al.	
	Filed: June 7, 1995	Group: 1631

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPRO- PRIATE
	4 8 4 7 2 4 0		Ryser			
	5 2 1 2 0 5 9		Schwartz			
	5 6 4 3 7 3 0		Banker			
	5 6 5 2 0 9 4		Usman			
	5 8 0 7 6 7 7		Eigen			
	5 9 1 4 2 3 0		Liu			
	5 9 9 8 3 8 3		Wright			
	5 2 4 2 9 0 6		Pagano			
	5 5 9 1 6 0 0		Ecker			
	5 5 9 1 7 2 0		Anderson			
	5 6 1 4 6 1 7		Cook			
	5 6 4 3 7 8 0		Baker			

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANS- LATION YES NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Scheit, Karl H., <u>Nucleotide Analogs: Synthesis and Biological Function</u> , John Wiley & Sons, Inc., New York, 1980, 288 pages
	Kornberg, A., <u>DNA Synthesis</u> , W. H. Freeman And Company, San Francisco, 1974, Chapter 7, pages 227-228
	Kornberg, A., <u>DNA Replication</u> , W. H. Freeman And Company, San Francisco, 1980, Chapter 12, "Inhibitors of Replication," pages 415-441
	Adams, R. L. P. et al., <u>Davidson's The Biochemistry of the Nucleic Acids</u> , 8th Edition, Academic Press, New York, 1976, Chapter 11 "Replication of DNA," pages 298-299
EXAMINER	DATE CONSIDERED
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Receipt date: 05/23/2000

08486069- GAU: 1631

Form PTO-1449 U.S. Department of Commerce (REV. 8-83) Patent and Trademark Office INFORMATION DISCLOSURE CITATION (use several sheets if necessary)	Atty. Docket No. ENZ-5(D8)(C2)	Serial No. 08/486,069
	Applicants: Dean L. Engelhardt et. al.	
	Filed: June 5, 1995	Group: 1631

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPRO- PRIATE
	5 6 6 5 7 1 0		Rahman			
	5 7 3 6 2 9 4		Ecker			
	5 8 1 1 2 3 2		Crooke			
	5 8 7 4 5 6 4		Ecker			
	5 8 9 1 4 6 8		Martin			



FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRAN- SLATION YES NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Langen, P., <u>Antimetabolites of Nucleic Acid Metabolism: The Biochemical Basis of Their Action, with Special Reference to their Application in Cancer Therapy</u> , Gordon and Breach, New York, English edition translated from the German by Dr. Thomas A. Scott, 1975, pages 143-187	
Darlix et al., <u>Biochemistry</u> 10:1525-1531 (1971)	
Geider, K., <u>European Journal of Biochemistry</u> 27:554-563 (1972)	
Darlix and Fromageot, <u>Biochimie</u> 56:703-710 (1974)	
EXAMINER	DATE CONSIDERED
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSB/

08486069 - GAU. 1631

U.S. PATENT DOCUMENTS



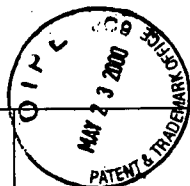
FOREIGN PATENT DOCUMENTS

[illegible]

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

		Marcus, F., <u>Cancer Research</u> 36 :1847 (1976)
		Simoncsits and Tomasz, <u>Tetrahedron Letters</u> 44 :3995-3998 (1976)
		Chladek et al., <u>Biochemistry</u> 16 :4312-4319 (1977)
		Piperno and Alberts, <u>Journal of Biological Chemistry</u> 253 :5174-5179 (1978)
EXAMINER		DATE CONSIDERED
<p>*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>		

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSB/

U.S. PATENT DOCUMENTS[illegible][illegible]

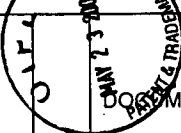
		Kortnyk et al., <u>Eur. J. Med. Chem. - Chimica Therapeutica</u> <u>15</u> :77-84 (1980)
		Keppler et al., <u>Biochemical Journal</u> <u>206</u> :139-146 (1982)
		Yang and Metzler, <u>Methods in Enzymology</u> <u>62</u> :528-551 (1979)
		Stridh et al., <u>Archives of Virology</u> <u>61</u> :245-250 (1979)
EXAMINER		DATE CONSIDERED
<p>*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>		

Form PTO-1449 U.S. Department of Commerce (REV. 8-83) Patent and Trademark Office INFORMATION DISCLOSURE CITATION (use several sheets if necessary)	Atty. Docket No. ENZ-5(D8)(C2)	Serial No. 08/486,069
	Applicants: Dean L. Engelhardt et. al.	
	Filed: June 5, 1995	Group: 1631

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPRO- PRIATE

FOREIGN PATENT DOCUMENTS



DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRAN- SLATION YES NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Stoeckler et al., <u>Biochemistry</u> 19:102-107 (1980)
	Montgomery, J. H. and H. Jeanette Thomas, "4-Amino-7- β -D-Ribofuranosyl-7H-Imidazol[4,5-d]-v-Triazine(2-Aza-Adenosine) The Synthesis of 2-Azapurine Nucleosides from Purine Nucleosides Accomplished via Ring Opening Followed by Reclosure with Nitrous Acid," in <u>Nucleic Acid Chemistry: Improved and New Synthetic Procedures, Methods and Techniques</u> , Part Two, Dr. Leroy B. Townsend and Dr. R. Stuart Tipson, Editors, John Wiley & Sons, New York, 1978, No. 118, pages 681-685
	Shibaev, V. N. and S. M. Spiridonova, "1-Methyladenosine-5'-(α - -Glucopyranosyl Pyrophosphate): Methylation of Adenosine Derivatives," in <u>Synthetic Procedures in Nucleic Acid Chemistry</u> , Volume I, Werner Zorbach and R. Stuart Tipson, Editors, Interscience Publishers, New York, 1968, No. 14, pages 461-462
	Thomas, H. Jeanette and J. A. Montgomery, "3-Benzylpurines," in <u>Synthetic Procedures in Nucleic Acid Chemistry</u> , Volume I, Werner Zorbach and R. Stuart Tipson, Editors, Interscience Publishers, New York, 1968, No. 10, pages 28-30
EXAMINER	DATE CONSIDERED
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

08486589-7 GAU: 1631

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSB/

Form PTO-1449 U.S. Department of Commerce (REV. 8-83) Patent and Trademark Office INFORMATION DISCLOSURE CITATION (use several sheets if necessary)	Atty. Docket No. ENZ-5(D8)(C2)	Serial No. 08/486,069
	Applicants: Dean L. Engelhardt et. al.	
	Filed: June 5, 1995	Group: 1631

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPRO- PRIATE

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANS- LATION YES NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Srinivasan et al., <u>J. Chemical Society</u> D24:1668-1669 (1970)
	Kaneko et al., "8,2-Anhydrides of Purine -8-Thiol Nucleosides (or of Purine 2'-Thionucleosides): Synthesis of 8,2'-Anhydronucleosides of Purine-8-thiol (or of 8,2'-Anhydro-(2'-thionucleosides)) by use of Diphenyl Carbonate as the Cyclizing Agent," in <u>Nucleic Acid Chemistry: Improved and New Synthetic Procedures, Methods and Techniques</u> , Part Two, Dr. Leroy B. Townsend and Dr. R. Stuart Tipson, Editors, John Wiley & Sons, New York, 1978, No. 103, pages 395-399
	Robins, M. J. and G. L. Bason, "6-Chloro-9-(2-Deoxy- β -D-Erythro-Pentofuranosyl)Purine from the Chlorination of 2'-Deoxyinosine: Direct Replacement of the 6-Oxo Group by a Chlorine Atom in a Purine 2'-Deoxynucleoside: Stabilization of the Glycosyl Bond Towards Cleavage by Acid," in <u>Nucleic Acid Chemistry: Improved and New Synthetic Procedures, Methods and Techniques</u> , Part Two, Dr. Leroy B. Townsend and Dr. R. Stuart Tipson, Editors, John Wiley & Sons, New York, 1978, No. 104, pages 601-606
	Zemlicka, J. and J. Owens, "6-Chloro-9- β -D-Ribofuranosylpurine: A Versatile Intermediate in the Synthesis of Purine Ribonucleosides," in <u>Nucleic Acid Chemistry: Improved and New Synthetic Procedures, Methods and Techniques</u> , Part Two, Dr. Leroy B. Townsend and Dr. R. Stuart Tipson, Editors, John Wiley & Sons, New York, 1978, No. 106, pages 611-614
EXAMINER	DATE CONSIDERED
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSB/

Form PTO-1449 U.S. Department of Commerce (REV. 8-83) Patent and Trademark Office INFORMATION DISCLOSURE CITATION (use several sheets if necessary)	Atty. Docket No. ENZ-5(D8)(C2)	Serial No. 08/486,069
	Applicants: Dean L. Engelhardt et. al.	
	Filed: June 5, 1995	Group: 1631

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPRO- PRIATE

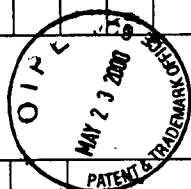
FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRAN- SLATION YES NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

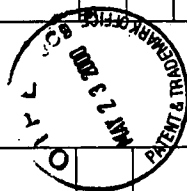
	Kochetkov et al., "3-Methyluridine 5'-Phosphate: Methylation of Uridine Derivatives with Diazomethane: Phosphorylation of Nucleosides with Pyrophosphonyl Chloride," in <u>Synthetic Procedures in Nucleic Acid Chemistry</u> , Volume I, Werner Zorbach and R. Stuart Tipson, Editors, Interscience Publishers, New York, 1968, No. 152, pages 497-499
	Zemlicka, J., "3-Methyl-6-Azauridine [4-Methyl-2- β -D-Ribofuranosyl-AS-Triazin-3,5-(2H,4H)-Dione]: Alkylation of a Nucleoside Antimetabolite by Use of N,N-Dimethyl-formamide Dimethyl Acetal," in <u>Nucleic Acid Chemistry: Improved and New Synthetic Procedures, Methods and Techniques</u> , Part Two, Dr. Leroy B. Townsend and Dr. R. Stuart Tipson, Editors, John Wiley & Sons, New York, 1978, No. 78, pages 451-453
	Piskala, A. and F. Sorm, "1- β -D-Ribofuranosyl- δ -Triazine-2,4-(1H,3H)-Dione (5-Azauridine): Direct Synthesis of a 5-Azauridine Ribonucleoside by the Fisher-Helferich Procedure," in <u>Nucleic Acid Chemistry: Improved and New Synthetic Procedures, Methods and Techniques</u> , Part Two, Dr. Leroy B. Townsend and Dr. R. Stuart Tipson, Editors, John Wiley & Sons, New York, 1978, No. 79, pages 455-459
	Poverenny et al., <u>Molecular Immunology</u> 16:313-316 (1979)
EXAMINER	DATE CONSIDERED
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSB/

U.S. PATENT DOCUMENTS[illegible]

DOCUMENT NUMBER										DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO	

	Visser, D. W. and P. Roy-Burman, "5-Hydroxyuridine 5-Phosphate Derivatives: Substitution Reactions at the Pyrimidine Ring of Nucleotides," in <u>Synthetic Procedures in Nucleic Acid Chemistry</u> , Volume I, Werner Zorbach and R. Stuart Tipson, Editors, Interscience Publishers, New York, 1968, No. 151, pages 493-496
	Cadet, J., "1-(2-Deoxy-- β -D-Erythro-Pentopyranosyl)Uracil and Its α -D Anomer: Acid-Catalyzed Isomerization of the Glycosyl Group in 5,5-Dibromo-2'-deoxy-5,6-dihydro-6-hydroxyuridine," <u>Nucleic Acid Chemistry: Improved and New Synthetic Procedures, Methods and Techniques</u> , Part Two, Dr. Leroy B. Townsend and Dr. R. Stuart Tipson, Editors, John Wiley & Sons, New York, 1978, No. 55, pages 311-315
	Kondo et al., <u>Makromol. Chem., Rapid Commun.</u> 1:303-306 (1980)
	Nair et al., <u>Journal of Organic Chemistry</u> 45:3969-3974 (1980)
EXAMINER	DATE CONSIDERED
<p>*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	

U.S. PATENT DOCUMENTS[illegible]

DOCUMENT NUMBER										DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO		

		Fujii et al., <u>Chem. Pharm. Bull.</u> 28 :3443-3446 (1980)
		Hiraoaka, K. and T. Yokoyama, <u>Int. J. Biolog. Macromolecules</u> 1 :50-54 (1979)
		Zeleznick, L. D., "6-Amino-9-(4-Dimethylaminobutyl)-9H-Purine," in <u>Nucleic Acid Chemistry: Improved and New Synthetic Procedures, Methods and Techniques</u> , Drs. Leroy B. Townsend and R. Stuart Tipson, Editors, John Wiley & Sons, Inc., 1978, pages 17-18
		Watson, A. A., <u>Journal of Organic Chemistry</u> 39 :2911-2916 (1974)
EXAMINER		DATE CONSIDERED
<p>*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>		

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSB/

08486089-Sheet 12 of 13-GAU: 1631

U.S. PATENT DOCUMENTS

[illegible]

FOREIGN PATENT DOCUMENTS

[illegible]

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

		Helfer et al., <u>Journal of Organic Chemistry</u> 46 :4803-4804 (1981)
		Hosmane, R. S. and N. J. Leonard, <u>Synthesis</u> 2 :118-119 (1981)
		Hayashi et al., <u>Bull. Chem. Soc. Japan</u> 53 :277-278 (1980)
		Kondo et al., <u>Synthetic Communications</u> 10 :267-271 (1980)
EXAMINER		DATE CONSIDERED
<p>*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>		

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSB/

Form PTO-1449 U.S. Department of Commerce (REV. 8-83) Patent and Trademark Office INFORMATION DISCLOSURE CITATION (use several sheets if necessary)	Atty. Docket No. ENZ-5(D8)(C2)	Serial No. 08/486,069
	Applicants: Dean L. Engelhardt et. al.	
	Filed: June 5, 1995	Group: 1631

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPRO- PRIATE

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION	
						YES	NO
0142 MKT 7-2000 PATENT MARK OFFICE 837							

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Pitha, J. and P. O. P. Ts'o, <u>Journal of Organic Chemistry</u> 33 :1341-1344 (1968)
	Inaki et al., "Synthesis of Poly-L-Lysine Containing Nucleic Acid Bases," in <u>Modification of Polymers</u> , Charles E. Carraher, Jr. and Minoru Tsuda, Editors, ACS Symposium Series 121, American Chemical Society, Washington, D.C., 1980, pages 359-370
	Shimidzu et al., <u>Bulletin of the Chemical Society of Japan</u> 52 :3362-3365 (1979)
EXAMINER	/John S. Brusca/
DATE CONSIDERED	10/03/2011
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /JSB/